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ABSTRACT

A study was conducted in order to examine the current state of the art in library network delivery of consumer information services and to develop an assessment model for the effectiveness of network delivery of citizens' information. Based on a comprehensive survey of 620 library networks, typologies for both library and non-library networks providing consumer information services were formulated. With the assistance of an advisory group consisting of experts in both library and non-library network activities, a conceptual model was developed for evaluating the effectiveness of information networks in providing consumer information. The model consisted of research questions organized into 13 areas of consideration, and an interview guide was developed for testing and refining the model. Five library and four non-library networks providing consumer information services were selected for in-depth case analyses. These analyses, which were derived from the interview guide, reflected the history and present status of the networks, as well as the short-term and long-term concerns of network staff on the provision of consumer information services. Major similarities and dissimilarities among the networks were evident; the findings of the case analyses were used to modify the original assessment model. The methodology and results of the study are briefly presented in this summary final report. (Author/ESR)

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Summary Final Report

Project No. 039MH1001
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RFP No. 80-76

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CRITERIA OF EFFECTIVENESS FOR NETWORK DELIVERY OF CITIZENS INFORMATION THROUGH LIBRARIES

September 1982

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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IR050283

ABSTRACT

This contracted study for the Office of Libraries and Learning Technology, Office of Educational Research and Improvement, U. S. Department of Education, examined the current state of the art in library network delivery of consumer information services and developed an assessment model for the effectiveness of network delivery of citizens' information, with an emphasis on the role of libraries. The first phase of this study, which involved a comprehensive survey of 620 library networks, developed typologies for both library and non-library networks providing consumer information services.

With the assistance of an Advisory Group consisting of experts in both library and non-library network activities, a conceptual model, including thirteen areas of consideration in developing criteria of effectiveness of information networks in providing consumer information services, was developed. For each of the thirteen areas, research questions were formulated. An Interview Guide was developed for testing and refining the conceptual model.

Based on the network typology developed by the research team, nine networks (five library and four non-library networks) providing consumer information services were selected for in-depth case analyses. Case analyses, which were derived from the Interview Guide, reflected the history, present status, as well as the short-term and long-term concerns of network staff on the provision of consumer information services. Even with the limitation of nine case analyses, major similarities and dissimilarities among the networks were evident. The findings of these case analyses enabled the researchers to re-examine the research questions. This final report, as well, contains the findings of the individual interviews upon which the assessment model was examined and finally modified.

ACKNOWLEDGEMENTS

This contracted project from the Office of Libraries and Learning Technology, U.S. Department of Education (Contract No. 300-81-0018), involved the ideas, encouragement, advice, and consciencious effort of many people. Unfortunately, not all of them can be acknowledged individually. We want to single out the following for special recognition. Throughout the whole project, we worked closely with an active Advisory Group consisting of five experts representing different aspects of networking and project concerns: Dr. Neal Kaske, Director of Research and Development for OCLC, Inc.; Mrs. Barbara Markuson, Executive Director of the Indiana Cooperative Library Services Authority; Joseph McDonough, Esq., Deputy Director of the City of Boston Consumer Council; Mr. Vernon E. Palmour, Consultant from Reston, Virginia; and Mr. Ward Shaw, Executive Director of the Colorado Alliance of Research Libraries. We benefitted greatly from their advice, suggestions, and discussion.

During the early phases of this study, specifically the literature search and telephone survey of the 620 library networks, numerous research assistants participated with enthusiasm and devotion. In particular, we want to acknowledge the assistance of Fred Friedman, Melissa Velhage, and Debby Carr. The final report was prepared through the use of word processing of a microcomputer system by Anne and Cathy Chen. Their able assistance has been very much appreciated.

This project would not have been possible without the enthusiastic cooperation from the administrators and staff of the nine library and non-library networks selected for in-depth case analyses. We have acknowledged a long list of individuals from these networks in our Final Report, thus shall not repeat their names again.

Dean Robert D. Stueart of the Graduate School of Library and Information Science, Simmons College, generously contributed his time to this project. He offered support and encouragement, worked closely with us and the Advisory Group, and critically read the final version of this report.

Finally, but not the least, we benefitted from the constant advice and suggestion of three staff members of the Office of Libraries and Learning Technology, U.S. Department of Education: Mr. Henry Drennan, Dr. Sarah Bishop, and Ms. Yvonne Carter. They served as project officer from the Department successively.

This a summary report of a study which was contracted to us as a direct result of our response to the RFP No. 80-76.* It was directed to investigate four objectives related to network provision of consumer information:

- develop "an evaluation methodology which can be utilized in determining the optimum design and performance of library information networks that provide citizens' consumer information"
- "furnish information that will enable State and local governments to design and conduct library information networks serving consumers with a maximum benefit/cost ratio"
- "respond to the resolutions on library information networking recommended by the White House Conference on Library and Information Services (November 1979)"
- "increase an awareness in the library and information science community of the correlation between quality standards for library information networks and the maximization of benefits to cost."

In this regard, the researchers developed an assessment model and investigated nine library and non-library networks, as stipulated in the RFP, in order to view these variables in proper context. Chapters 4 and 5 of the Final Report compare findings among nine networks and identify the range of criteria affecting network performance. They also identify points of similarity among the networks in an effort to aid library networks wanting to expand their role as providers of consumer information.

ADVISORY GROUP

An Advisory Group, consisting of members who are actively involved in different aspects of networking, was formed to aid in accurate definition of terms, to provide a more complete state of the art assessment than could be gathered from the published literature, to supply critical feedback on the research design, and to anticipate potential problem areas.

The first meeting of the Advisory Group, together with the U.S. Department of Education project officer and Simmons research team, was held at Simmons College on February 23 and 24, 1981, to discuss the research design and other aspects specified in the RFP No. 80-76. Extensive attention was paid to the definition of consumer information and to the role of networks in the provision

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* A separate 296-page Final Report has been submitted to the U.S. Department of Education together with this Summary Final Report.

of such information. The consensus of both the Advisory Group and the research team was that the topic was nebulous, lacking at this time a sufficient research base in the existing literature for the formulation of an appropriate, general conceptual model. As was previously mentioned, individual networks are experiencing problems in devising models and evaluative mechanisms for their own purposes; therefore, a meaningful general model is difficult to devise and test. The Advisory Group recommended that, prior to addressing the specifics of the contract, there be a determination of the number and types of networks, specifically library related, providing consumer information.

LITERATURE SEARCH

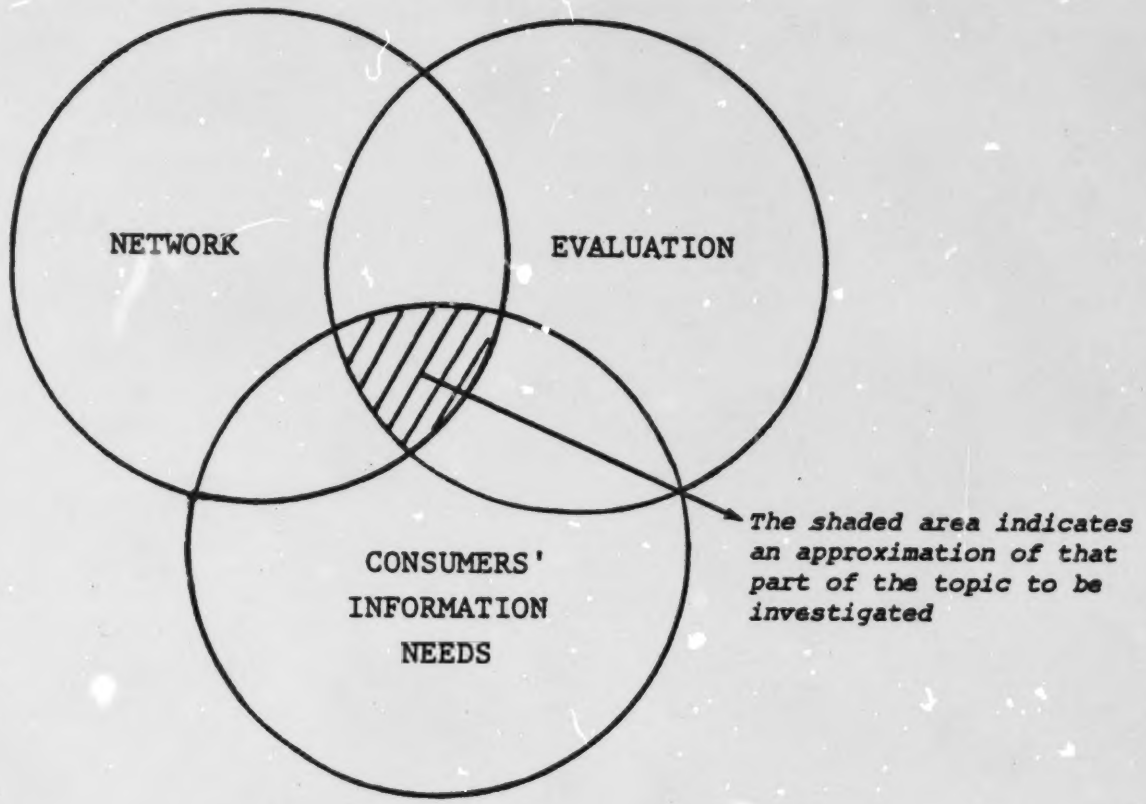
Existing literature helps us understand the extent to which consumer information is provided by library networks only in the context of information and referral services. It would seem, though, from the existing literature that library networks do very little in providing consumer information and that activities involving consumer information are not well publicized on a national level. The Final Report contains a Bibliography of relevant readings.

Given the inadequacy of existing literature, we cannot know which networks provide what types of consumer services to what sort of clientele, without performing surveys of library and non-library networks ourselves. These studies were completed and the results are presented in the Final Report. With these results, the researchers could determine the nature and types of consumer information services provided by the existing networks, and thus were better equipped to select the nine library and non-library networks for further extensive study.

ASSESSMENT MODEL

Chapter 2 of the Final Report presents the detailed discussion of the assessment model, and a separate 30-page paper on the model has also been submitted to the U.S. Department of Education, together with this summary final report. In short, Figure 1 conceptualizes the assessment model, which examines the effectiveness of networks in meeting consumers' information needs, while Table 1 depicts the areas for consideration in developing criteria of effectiveness of networks in meeting consumer information needs. The thirteen areas were derived from an analysis of the existing literature, extensive discussions at the Advisory Group meetings, the experiences of the Group members with present networks, as well as the findings of a previous

Figure 2.1. Effectiveness of Networks in Meeting Consumer Information Needs - A Conceptual Model for Research


NETWORK
EVALUATION
CONSUMERS' INFORMATION NEEDS
The shaded area indicates an approximation of that part of the topic to be investigated

study conducted by the researchers. (1) These thirteen areas gave rise to a series of research questions, which guided the collection of data and the evaluation of the assessment model. Chapter 5 of the Final Report presents the findings for each research question.

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[1] Ching-chih Chen and Peter Hernon, Information Seeking: Assessing and Anticipating User Needs. New York: Neal-Schuman Publishers, 1982. See also Ching-chih Chen and Peter Hernon, A Regional Investigation of Citizens Information Needs in New England: Executive Summary Report and Final Report. (Research project supported by the Office of Libraries and Learning Technology, U.S. Department of Education, Project No. 475-AH-90031). Boston, MA: Graduate School of Library and Information Science, Simmons College, 1981.

Table 1. Areas of Consideration in Developing Criteria of Effectiveness of Information Networks in Meeting Consumer Information Needs

1. Definition of consumer information
2. Types of consumer information that networks are providing (clearly formulated goals and objectives)
3. Availability of information services to consumers. (Are the services available directly to users or to libraries?)
4. Sources and levels of current and forthcoming fundings
5. Staffing (number of staff, change in staffing, morale, role of activists, etc.)
6. Degree of support from member libraries and administration
7. Service (articulation of a philosophy of service, cost of service, involvement in referral practices, etc.)
8. Relationship to other networks
9. Priority of consumer information services among network activities. (Are they the only activities? What else does the network do? Is there a perceived need for the services? Does the library play an active role in the provision of such services?)
10. Activities engaged in
    - information acquisition and organization
    - information dissemination
    - information referral
    - document delivery
    - information interpretation/advice
    - consumer education
    - advocacy
    - lobbying
    - problem-solving
11. Relative importance of criteria in providing information:
    - cost in money
    - cost in time
    - accuracy
    - up-to-dateness
    - understandibility
12. Publicity and marketing
13. Determination of user satisfaction (Implementation of formal evaluation component)

METHODOLOGY

After having formulated the areas for possible inclusion in the assessment model, and having identified the range of pertinent library and non-library networks, the researchers selected the stipulated nine networks in order to accomplish the following purposes:

- to verify that the tentative areas displayed in Table 1 seem to be reasonable
- to gather data on the research questions listed earlier
- to determine if other areas could be added to the assessment model.

INTERVIEW GUIDE

An Interview Guide was developed to gather data in order to examine the research questions in the contexts of the nine selected networks. A complete copy of this Guide is included as an appendix of the Final Report. The Guide consists of the following sections:

- the organizational structure of the network
- network goals and objectives
- goals for the consumer information services
- the consumer information services currently provided and those in the planning stage (e.g., target audience and how and why the services began)
- relationship to other networks
- fund allocation
- staffing
- network activities
- publicity of consumer services
- types of sources used in providing consumer information services
- the five criteria in providing consumer information services (e.g., cost in money and time)
- information transfer and new technology
- clientele and needs assessment
- user satisfaction
- future role of libraries in providing consumer information services
- background information on the network.

THE NINE SELECTED NETWORKS

The nine networks selected represent different types, involvements with consumer information, and degrees of sophistication. These networks are as follows:

Library Networks

- Community Health Information Network (CHIN) & the Watertown Free Public Library
- The Nassau Library System
- OCLC/CHANNEL 2000 & the Public Library of Columbus and Franklin County
- The Free Library of Philadelphia
- The Regional Energy/Environment Center, Denver Public Library

Non-Library Networks

- Better Business Bureau of Western Massachusetts
- Consumer Education Resource Network (CERN)
- Massachusetts Executive Office of Consumer Affairs
- Middlesex County Extension Service

LIMITATIONS OF THE ASSESSMENT MODEL

The Interview Guide was intended to provide an overview of each of the nine selected networks and its consumer information services. It cannot be regarded as an instrument for a precise evaluation of a network's effectiveness. Some items in the Interview Guide may not be appropriate in a particular case. Variations as to each network's target audiences, definition of consumer information services, etc., all inhibit generalization and affect the precision of developing a comprehensive assessment model. For example, answers to questions pertaining to the current financial situation faced by a network may reflect uncertainty due to the present funding situation under the Reagan Administration or Proposition 2-1/2 in Massachusetts or 13 in California.

The assessment model cannot really deal with the cost-benefit impact of single libraries (members of a network) directly on citizens or measure such benefits on the networks themselves. Networks do not always benefit citizens directly; they may benefit libraries which in turn benefit users. One would have to separate the activities that a member library engages in that do not depend on the network from those activities that are dependent on the network. This separation of activities would have to be performed on formal library networks as opposed to the informal information and referral (I&R) networks of libraries and social service agencies. Such research, however, is beyond the scope of this present exploratory study.

It should be remembered that the study only examines consumer information services provided in a network context rather than focusing on the range of services that individual libraries may provide as part of their own information and referral services. Perhaps many libraries find that they can meet the consumer information needs of their clientele without resorting to networking. The testing of such an assumption is beyond the scope of this study. Yet, the study does seem to show that in certain contexts, networking is beneficial for meeting consumer information needs.

Furthermore, library and non-library networks operate with widely divergent definitions of consumer information. In order to approach the telephone and on-site interviewing in a consistent manner, the definition of consumer information was provided in Chapter 1 of the Final Report. However, the problem of a lack of

consensus concerning a definition still exists.

Finally, there are limitations to the study in terms of the selection of only nine networks for in-depth study. The project had to resort to individual case studies, which (as shown in Part II of the Final Report) did not permit a precise determination of effectiveness or statistical comparison. This point was further discussed in Chapter 3 of the Final Report.

GENERAL FINDINGS

It is the researchers' belief that a most important finding of this study may be that some library and non-library networks have been creative in their approaches to meeting information needs. They have developed innovative programs such as career counseling and job centers, and effective means of publicity, including newsletters and the placement of articles in local newspapers. The accompanying interview reports provide more detailed information about the creative approaches adopted.

Awareness of these approaches, as well as some of the service programs initiated, may be of assistance to public libraries in dealing with some of the problems they currently face. It may be that the success of networks such as Project CHIN, CERN, and the Regional Energy/Environment Center in offsetting the loss of government support will have implications for other networks. They may show the path to other funding, especially if the Denver Public Library is able to establish a fee-based information service supported by the private sector.

The consumer information services operate within a specialized context. The networks must typically select specific areas in which to develop their services. They do not attempt to be "all things to all people;" instead, they select those areas in which they believe that they can be most effective given funding, staffing, etc. Second, depending upon the scope and extent of the services provided, consumer information services can be expensive to operate. They may require Federal funding or other outside support; such support may be necessary for not only the initiation of the services but also their continuing operation. Clearly, outside funding or "soft" money has played an important role in the development of consumer information services. One criterion for success will relate to the degree to which networks can get their member libraries to absorb the costs of the services once the outside money has ceased. Both Project CHIN and the Nassau Library System have been successful in this regard. Member libraries realize the value of the consumer information services currently offered and are willing to provide financial and staff support to the best of their ability.

Further research might profitably probe the costs associated with the operation of specific consumer services. Undoubtedly the Regional Energy/Environment Center and CERN are more expensive to operate than are the consumer related services provided by the Nassau Library System and CHIN. One criterion for judging the success of a consumer related network may be related to the ability of the networks to survive once the initial funding has ceased. The viability of some networks may be evident from the efforts to seek and find other sources of funding. Apparently an overriding goal for networks dependent solely upon the provision of specialized consumer information services (e.g., the Regional Energy/Environment Center and CERN) may become self-preservation.

Third, the value of consumer information services provided in a network context can be questioned. Obviously, many of the staff members interviewed believed that the services were essential if public libraries are to meet basic information needs of their constituents. If the libraries do not provide such services, other institutional providers might. Yet, library administrations may not view consumer services with the same priority. It may be that some libraries can provide consumer services without engaging in networking. When they do resort to networking, it can be of varying degrees of sophistication, ranging from traditional interlibrary loan to the establishment of referral centers and a Regional Energy/Environment Center. Perhaps many libraries believe that they can meet most of their clients' consumer information needs without resorting to formal networking involving the application of new technology. Interestingly, most of the networks studied did not make use of new technology to meet consumer information needs, except by conducting online searches of bibliographic databases; such services often involved user fees.

Networks can, but need not, provide online computer access to information services. The case studies presented in this report emphasize that online access typically focuses on data base searching. Other applications specifically limited to consumer information services are few. However, as more libraries automate their operations, consumer information services will be impacted. For example, the OCLC's CHANNEL 2000 and "Maggie's Place," operated by the Pikes Peak District Library, Colorado Springs, Colorado, provide consumer information services as part of their total offerings. Undoubtedly with the further applications of new technology and the wider availability of home computers, more libraries will be able to develop similar service programs and to share their services with other communities and information providers. Systems are emerging that permit home telephone and television sets to act as terminals for gaining access to library catalogs and other types of information. Libraries will be expanding their role in this regard and

will cooperate with cablevision so that more information can be accessed from the home. Libraries will be able to provide consumer information services faster, easier, but cheaper with the help of new technology. The question therefore becomes what shape will consumer information service programs take (e.g., community information files or the types of services offered by CERN, the Nassau Library System, or the Regional Energy/Environment Center) and what types of funding will be available. It would seem natural that given the present funding situation, consumer information services are not expected to command the same priority that they did a few years ago. With the promise of new technology, most likely more libraries will utilize this technology more to develop their consumer information network in order to meet their clientele's diversified information needs.

Some networks could be characterized as a single type cooperative network, meaning that they serve a single type of information provider. Current funding priorities may force more networks interested in the provision of consumer information services to become multi-type cooperative networks which serve more than one type of information provider. Libraries therefore would expect to link more with other information providers in order to expand their capacity to provide information and referral services.

Traditionally, libraries have been associated with such functions as information acquisition and organization, active information dissemination, and coordination of diverse information resources. The wise application of technology can expand their effectiveness in fulfilling these traditional roles. Although library's active participation in community affairs may still be the exception rather than the rule, the examples of innovative programming presented in Part II of the Final Report, may comprise one of the most important aspects of this exploraory study. Further research might explore consumer information services provided by public libraries and determine the type of consumer information that can be met on a local basis. Still, networking can be beneficial. It calls attention to innovative programming and enables such programs to be available outside the local context. Project CHIN, for example, unites a hospital library and six public libraries so that the libraries can develop their collections and improve their reference and referral services in the area of consumer health information.